

**REMARKS**

This application is believed to be in condition for allowance.

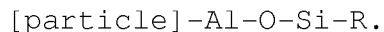
**Status of the Claims**

Claims 24-31, 33-44 and 46 remain pending in the application.

**Claim Rejections-35 USC §103**

Claims 24-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over TURNER US 4,213,886 ("TURNER") in view of WO 94/28074 ("WO '074"). This rejection is respectfully traversed for the reasons below.

Independent claim 24 is directed to a pigment composition comprising particles (p) based on aluminum metal, which have a surface oxidation layer with a mean thickness at most equal to 5 nm, and the particles (p) are covered with a protective layer entirely composed of hydrocarbon chains R. The hydrocarbon chains R are bonded to the surface of the particles (p) via the bonds described in the following formula:



The claimed composition is devoid of the presence of any fatty acid or fatty acid salt.

TURNER was offered for teaching an aluminum flake coated with a silane, where the resulting bond is described as

Al-O-Si-R, and the coating is free of fatty acid or fatty acid salt. The Official Action recognized that the long chain organic acids R are displaced with phosphate ions in order to obtain a coating.

WO '074 was offered for teaching metal flakes that are devoid of fatty acids in order to provide odorless and bright metallic effects in dispersion containing the flakes. The Official Action relied on the English Abstract and a claim of the underlying document.

The position of the Official Action was that "one of ordinary skill in the art would be motivated to utilize the fatty-acid-free aluminum flakes taught by WO '074 in the coated aluminum flakes of Turner so that the step of displacing long-chain organic acids is rendered unnecessary."

However, the combination fails to render obvious the claimed invention for at least three reasons:

**I.    The combination would have rendered  
      TURNER unsatisfactory for the intended purpose.**

The modification suggested in the Official Action would have eliminated the very silane structure required by TURNER. That is, a substitution of the flake-form pigments of WO '074 for the aluminum flakes of TURNER would not simply eliminate the fatty acids (and, thus, the need for phosphate ions), but also the silane structure.

As the invention of TURNER requires a monolayer of silane, one would have been strongly encouraged not to substitute the silane coated aluminum flakes of TURNER with the flakes of WO '074 to merely avoid a the phosphate treatment step, as this substitution would have rendered TURNER unsatisfactory for its intended purpose.

**II. There would have been no expectation of success in making such a substitution.**

TURNER displaces the long chain organic acids R with phosphate ions is to remove material from the flake surface that causes poorer appearance for use as a metallic paint for vehicles. See, e.g., Column 5, lines 28-37 in view of column 1, lines 30-56.

The flake-form pigments of WO '074 are produced by crushing plus a binding agent or binding agent solution. That is, the flake form pigments comprise a binding agent on the flake surface.

However, there is no suggestion in the WO '074 abstract that the pigments are suitable for the same purpose of TURNER, e.g., metallic paint for vehicles. Indeed, there is no indication that the binding agent would provide an acceptable appearance, e.g., compared to a silane monolayer with phosphate ions forming an outer layer.

Thus, as TURNER requires a specific monolayer structure (silane) with a specific outer layer (phosphate ions) to provide a desired appearance in a metallic vehicle, there would have been no expectation of success in the proposed substitution.

**III. The combination fails  
to teach the claimed invention.**

Even if one were to modify TURNER as suggested in the Official Action, the proposed combination fails to teach the structure according to the claimed invention, i.e., [particle]-Al-O-Si-R. That is, a substitution of the flake-form pigments of '074 for the aluminum flakes of TURNER avoids the displacement of fatty acids with phosphate ions, and the silane structure that provides the fatty acids.

As discussed above, the abstract of WO '074 discloses that the flake-form pigments are produced by crushing with a binding agent or binding agent solution.

Thus, the use of the compositions of WO '074 in the process of TURNER would not have lead to a composition as claimed in independent claim 24, wherein the protective layer is entirely composed of the hydrocarbon claims R, since the obtained composition would further include the binding material.

Therefore, for at least these three reasons, the proposed combination fails to render obvious the claimed

invention, and withdrawal of the rejection is respectfully requested.

Claims 33-44 and 46 were rejected under 35 USC 103(a) as being unpatentable over TURNER in view WO '074, further in view of either KARTON et al. US 5,531,930 ("KARTON") or HASHIZUME US 5,944,886 ("HASHIZUME"). This rejection is respectfully traversed.

TURNER and WO '074 were offered for the reasons discussed above.

KARTON was offered for teaching applying external pressure to aluminum flakes in order to reduce the amount of coat, as well as increase the bulk density of the final coated aluminum.

HASHIZUME was offered for teaching various mechanically deforming processes as conventional dispersion of aluminum flakes.

However, neither KARTON nor HASHIZUME is able to remedy these deficiencies of TURNER and WO '074 for reference purposes, as neither of these documents discloses a composition as described by claim 24.

Therefore, the proposed combination fails to render obvious the independent claim 24, claims 33-44 which are directed to its preparation, and claim 46 which is directed to a metallic

paint including the composition of claim 24, and withdrawal of the rejection is respectfully requested.

**Conclusion**

In view of the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert A. Madsen/  
Robert A. Madsen, Reg. No. 58,543  
209 Madison Street, Suite 500  
Alexandria, VA 22314  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

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